

III. Status of the Claims

Claims 1-3, 6 and 15-18 have been cancelled.

Claims 4, 5, 7-14 and 39-50 have been finally rejected.

Claims 19-38 have been withdrawn as drawn to a non-elected invention.

The claims on appeal are claims 4, 5, 7-14 and 39-50.

IV. Status of Amendments

There were no amendments filed subsequent to final rejection.

V. Summary of the Claimed Subject Matter

How can roofs be protected against algae growth over a long service life?

In the roofing industry, rock is crushed to a predetermined size, 0.1 micrometer to 40 micrometer (specification, page 5, lines 27-28) for use in preparing the mineral granules that cover the asphalt shingles that cover residential roofs in many parts of our country. The granules are the structure's first line of defense against the elements. Typically, the granules are covered with a thin, highly durable colored ceramic coating, which enhances the appearance of the roof. Significant quantities of stone dust (less than 0.1 micrometer), are generated by this process. The present invention turns this liability into an asset.

In some parts of this country environmental conditions favor the growth of algae on roofs. The algae growth can substantially detract from the appearance. Typically, algae growth is discouraged by incorporating a biocide into the ceramic coating on the granules. The biocide slowly leaches out of the coating. However, it is difficult to control leaching from a thin coating, and the available biocide may dwindle to an ineffective level long before the anticipated life of the roof.

The present invention addresses the problem by making use of stone dust to form agglomerates that incorporate biocide.